

REMARKS

In this Response, claim 1 has been amended and claims 13 – 16 have been added. Support for these amendments and added claims is found throughout the originally submitted application. No new matter has been added.

Claims 1-16 are presently pending.

35 USC § 103 Rejections

In the Office Action claims 1, 2, 6 and 7 are rejected under 35 USC 103(a) as being unpatentable over Brecher (US Patent No. 5,544,256) (hereinafter “Brecher”) in view of Frigon (US Publication No. 2002/0085093) (hereinafter “Frigon”). The Applicants herein traverse these rejections of these claims.

Claim 1 recites an inspection system for automatically detecting and classifying manufacturing defects in decorative wood panels following assembly of a decorative wood laminate, having a decorative wood facing, to a core or blank, said decorative wood facing having desirable areas of natural wood shading and said system using a photographic image of said panel as the basis for detecting and classifying said defects, which system comprises:

- creating a computer driven recipe utilizing detectors and classifiers specifically created from images of defects of varying types and degrees exhibited by sample decorative wood panels comparable to said decorative wood panels to be inspected;

- photographically scanning said decorative wood panels to be inspected following assembly and determining therefrom and with reference to the computer driven recipe the occurrence of defects and a defect value based on the size and shape of the defect; and

- assigning a grade of acceptability to such inspected panels based upon the defect value indicated.

The inspection system of claim 1 is for inspecting decorative wood panels “following assembly.” Because the decorative wood panels include natural wood shading, no two wood panels will be identical. The inspection system of claim 1 accounts for this inherent variation by creating a computer driven recipe utilizing detectors and classifiers specifically created from images of defects of varying types and degrees exhibited by sample decorative wood panels. The types of manufacturing

defects that may occur during the assembly process include, e.g., scratches, edge nicks or gouges, misalignment of the face and core, etc. The type of defect may as important as the size of the defect and may factor into the ultimate grading of the wood panel differently. For example, if the face and core are misaligned the defect area may be large, but the wood panel may still be reworked. If, e.g., the defect is a gouge, a substantially smaller defect may necessitate the wood panel being rejected or shopped. It is the recipe that is created from the images of the defects that allows for this grading system to work.

Brecher, on the other hand, does not teach, suggest, or imply a recipe created from images of the defects. While Brecher does teach the comparison of an input image to a reference image, the reference image is the model of what the input image should be. Brecher teaches that the reference image may be created off-line from a large sample of defect-free parts; created from design data; or created from other product areas of identical pattern. However it is created, the reference image is used as the exemplary non-defect image. The input image is aligned with the reference image and a pixel-by-pixel comparison is done. If there is variation between corresponding pixels, the pixel in the input image is labeled as a defective pixel. Column 8, line 19 *et seq.*

Furthermore, while Brecher does teach the classification of defects by analyzing features of the defect cluster, e.g., location, area, etc., this is not done with reference to the computer driven recipe created from images of the defects. The classification of Brecher simply identifies the defect (by comparison to the reference image) and classifies it according to a variety of rules related to the defective area, location of the defect compared to location of features of the patterned semiconductor wafer, shape of the defect, etc. There is nothing to teach, suggest, or imply that the determining of the occurrence of defects and defect value is done with reference to the computer driven recipe as recited in claim 1.

For at least these reasons Brecher fails to make claim 1, as a whole, obvious.

Frigon also fails to teach, suggest, or imply these elements. Frigon is relied upon to teach assigning a grade of acceptability to inspected panels. Even assuming that this

accurately reflects the teachings of Frigon, it still does not correct for the deficiencies of the teachings of Brecher. Accordingly, claim 1 is patentable over this asserted combination.

Claim 2 depends from claim 1 and is patentable over this asserted combination for at least the reasons given above.

Claims 6 and 7 include limitations similar to the limitations discussed above. Specifically, these claims include creating recipes using photographic images of sample decorative wood panels exhibiting different types of defects and different degrees of the defects within the different types of defects. The combination of Brecher and Frigon fail to teach this element for at least the same reasons given above.

Claims 3, 4 and 9-12 are rejected under 35 USC 103(a) as being unpatentable over Brecher in view of Frigon as applied to claim 1 further in view of Perez (US Patent No. 6, 336,086) (hereinafter "Perez").

These claims depend from, or include limitations similar to, claims 1 and/or 6. Because Perez fails to correct for the deficiencies of Brecher and Frigon, these claims are also patentable over this asserted combination.

New Claims

The Applicants have taken this opportunity to present claims 13 – 16. These claims include limitations similar to those of claim 1 discussed above. Accordingly, these claims are patentable over the cited references for at least the same reasons as claim 1.

Petition under 37 C.F.R. §1.48 for Inventorship Change

The Applicants would like to take this opportunity to inquire as to the status of the Petition under 37 C.F.R. §1.48 for Inventorship Change requesting that Sigmund Sundfør be added as a joint inventor that was filed on April 13, 2005. To date, the Applicants are not aware of a decision being issued in this matter.

CONCLUSION

Applicants respectfully submit that all of the pending claims are in a condition for allowance. Accordingly, a Notice of Allowance is respectfully requested.

If the Examiner has any questions, he is invited to contact the undersigned at (503) 796-2972.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393.

Respectfully submitted,
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